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ORIGINAL DEPARTMENT.

COMMUNICATIONS.

GLACIAL ACETIC ACID IN NASAL HY-PERTROPHY.

BY CHAS. E. SAJOUS, M.D.,

Chief Assistant, Laryngoscopic Department, Jefferson College Hospital.

Several eminent specialists having spoken in the highest terms of the merits of glacial acetic acid in the destruction of hypertrophied mucous membrane, and consequently of its value in hypertrophic nasal catarrh, I determined to take advantage of the numerous cases which have lately presented themselves at the clinic of Jefferson College Hospital, adding to them some of my private ones, to investigate its real value.

In the nasal cavity proper, chronic inflammation gives rise to a deposit in the deep layers of the membrane, of new connective tissue elements and an infiltration of these deep layers with new cells. At the same time, in the epithelial elements there is a morbid activity in cell growth, by which this layer becomes abnormally thick ened and hypertrophied. Connective tissue is also abnormally developed by a slow process of proliferation, and having once become organized, remains a permanent element to deform the nasal cavities and interfere with their proper function. This tissue, being probably never absorbed, like the other cell elements of catarrh, furnishes, it seems to me, an explanation for the unsatisfactory results obtained in the treatment by astringents, their action being limited to the superficial mucous layer, and giving relief, therefore, only for a time. This is well exemplified in the better results obtained with this class of remedies in the treatment of chronic catarrhal inflammation of the pharyngeal tonsil, this being composed of an extensive agglomeration of follicles and glands, and almost entirely devoid of cellular tissue. In investigating the merits of glacial acetic acid in destroying the hypertrophied membrane, I have kept this point in view, and by dividing my treatment into two parts, one of destruction and one of induced absorption, the former directed to the hypertrophic tissue, which is generally limited to the two lower turbinated bones and to the septum, the latter to the vault of the pharynx, I obtained permanent results, which I could but seldom do, and that in exceptional cases, when using either class of remedies separately.

Glacial acetic scid has a great affinity for epithelial cells, and this suggested its use in hypertrophic thickenings of the mucous membrane, in which the epithelial layer plays an important part. Its action on cellular tissue is an indirect one if the applications are few in number, the tissue being then subjected to the pressure caused by cicatricial constriction; but direct, if these applications are renewed for a certain length of time, in proportion with the degree of hypertrophy. In this case, the epithelial layer becomes so thinned by destructive metamorphosis that the fluid penetrates into the cellular tissue itself and there keeps up its destructive action.

For its application, an instrument devised by Bosworth, of New York, is used—a flattened probe, bent at an angle of 150°. This is held in a universal handle, so that the bend of the instrument commences at about an inch from the end of the handle. This close proximity to the hand gives the operator a certain amount of steadiness, of great importance in the ultimate results. A

piece of cotton is wrapped around the flattened end, tightly if the quantity of acid to be held in its meshes is desired to be slight; loosely if the application is to be over a greater surface. It is dipped into the acid if both sides of the cavity are to be treated, that is, if there is septal hypertrophy besides the turbinate, and dropped on one side if it be limited to the latter. The vestibule being dilated and illuminated, the charged end is passed into the nasal cavity, following a line described by the free edge of the turbinated

A burning sensation is the result, which will continue for some time, if not checked by the application of an alkaline solution. Dobell's I do not find to act as rapidly as a saturated one of bicarbonate of sodium, acetic acid requiring a very strong alkaline solution for its neutralization. If applied at once, no pain whatever will be experienced, and the acid application will be just as effective. During the day, a "stuffy" feeling in the nostril is experienced, which will sometimes go so far as to occlude the passage. This, however, only lasts a few hours, and in some patients does not occur at all. The next day, shreds of the destroyed mucous membrane are discharged, and a feeling of relief is at once experienced by the patient. This continues until all the cauterized tissue has been thrown off. leaving a groove to mark the seat of the exfoliation. This groove gradually fills up, not by the reproduction of tissues, but by a displacement, as it were, of the surrounding superficial stratum, which contracts, thereby constricting the parts beneath. This process requires for its completion about a week, and if the application is re newed on the same spot during that week, quite a serious inflammation is the result, which will cause the patient some suffering. The amount of tissue destroyed is, of course, in accordance with its density and with the amount of acid used, but, however great it may be, it is but slightly perceptible to the eye. This is to say that the action is slow, and that the applications must be repeated many times, if satisfactory results are to be obtained. The improvement is gradual and steady, and if care be taken to touch the same spot each time, in order to as much as possible avoid the destruction of what ciliated pavement epithelium may remain, not only will the stenosis be remedied, but the physiological action of the membrane proper will be preserved.

In the pharyngeal vault, when there is inflammstion of the acinous glands, I have not found glacial acetic acid adaptable, giving rise to too much tuting that which I termed "induced absorption," will meet with success if properly applied. After the hypertrophic tissue along the turbinated bones has been reduced by the acid, I allow a couple of weeks to elapse without treatment, except a cleansing douche used night and morning. Then I either insufflate a powder, composed of iodoform and tannin, equal parts, or apply an ointment composed as follows:-

Morph. sulph., Acidi tannici. Iodoform. Ung. simpl.,

These, of course, being applied after thorough cleansing, by alkaline douche.

Case 1 .- A. H., aged 32, came to the clinic complaining of a hot, spicy feeling in the throat. accompanied by a constant "hemming" and muco-purulent expectoration. He did not complain of any nasal trouble, and I neglected, in the physical examination, to examine either the anterior or the posterior nares. I found the pharynx covered with inflamed follicles, considered the discharge as originating from the pharyngeal glands, and placed the patient under treatment for chronic follicular pharyngitis, applying actual cautery to the follicles, and prescribing alkaline sprays. After five weeks, the patient was discharged, the pharynx having returned to its normal appearance, and all symptoms having disappeared excepting the discharge, which had, however, greatly diminished. About a month later the patient returned, stating that he was as bad as ever, and that the discharge was greater than it had ever been. This time I did not neglect the nasal examination, and there found the source of the trouble. The pharyngeal gland was covered with a greenish white mucus, while the surface of the soft palate was in the same condition. Anteriorly, I found hypertrophy over the lower turbinates on both sides, with deflection of the septum to the left.

On the 14th of July, treatment by glacial acetic acid was begun, followed by insufflation of iodoform and tannin to the vault of the pharynx and upper surface of the soft palate. At the same time, and during the whole course of the treatment, I ordered the following solution to be applied with the douche :-

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Acidi salicyl., 3 ij 3 iij Sodii bibor., Glycerine, vj. M. Aquæ, ad

Sig .- Dessertspoonful in Oj lukewarm water. used by douche, night and morning.

Five weeks later the patient was discharged, irritation. Here, astringent treatment, consti- cured. I met him a few days ago, and he told me that he was as well as the day he was discharged.

Case 2.—Jenny A., aged 19, mill hand, came to the clinic complaining of difficulty in breathing through the nose, which forced her to keep her mouth open almost continually. This had begun about four years before, and her trouble was rapidly increasing. The discharge was merely mucus, but collected in lumps, which were "hacked" up into the mouth and expectorated. This forced oral breathing caused constant irritation in the throat, which gave her much trouble.

There being evidences of a scrofulous diathesis, I placed her under tonic doses of bichloride of mercury, with cinchona and carbonate of iron, and ordered the salicylic acid douche. The physical examination revealed hypertrophy of the middle turbinated on the left and of the inferior on the right. The glands being merely congested, the local treatment was limited to acetic acid, and after eight applications on each side, the patient was discharged, cured.

I can give twenty-three other cases treated in the same manner, with the best results. It seems that it not only destroys the hypertrophied tissues, but also checks the morbid activity of the deep layers. It is easy of application, causes no pain, if properly applied, does not cause too much destruction of tissue, is devoid of the danger of subsequent ulceration, as in other acids, and of that accompanying galvano-cautery, traumatic erysipelas.

1010 Walnut Street.

HOSPITAL REPORTS.

UNIVERSITY OF THE CITY OF NEW YORK.

A SUBGICAL CLINIC BY J. WILLISTON WRIGHT, M.D.,

Professor of Surgery in the University of the City of New York.

Philip W., thirty years of age, a carman by trade. A week ago last Monday he was cleaning a twenty-two calibre pistol, holding it in his left hand, the right hand in front of it with the mid dle finger over the mouth, when it suddenly went off. On examining his hand he found a small round opening situated at about the middle of the palmar surface of the middle finger. He was very sure that there was no opening through which the ball came out, and he supposes, therefore, that the ball is still in his finger. The patient states that two days after the receipt of the injury, while at the hospital, two incisions were made upon the finger, and the ball was probed for, but was not extracted. The back of the hand swelled, became red, and was very painful, and he lost his appetite and could not sleep. Two incisions were then made upon the back of

the hand, and one upon the back of the finger, one of the former closing, and the other two discharging freely.

I suppose, therefore, from the man's statement, that he had an attack of erysipelas of the hand, in consequence of this injury, and the surgeon who had charge of it very properly supposed, from the feel of it, and from the general condition of the patient, the rapid manner in which the swelling extended, and so on, that he had to deal with a phlegmonous form of erysipelas, or possibly a cellular erysipelas under the skin, in which the skin was involved subsequently, and it was supposed these incisions were necessary in order to save tissue; that there was suppuration going on in the connective tissue, and by making these inci-ins matter would be let out, and in that way he would prevent extensive sloughing of the soft tissues. This was very proper, but after all, it would seem the ball was not found. No probing was made for the ball after the first time referred to.

You can see the incision, commencing at the opening which the surgeon made at the first examination, and around here the counter-opening. Through these openings little bundles of horse hair were inserted, as a drainage tube. These horse-hair drainage tubes, permit me to remark, are being used now very much in the treatment of suppurating wounds, for three reasons: in the first place, they are perfectly innoxious to the wound itself; in the second place, they give a good free drainage to matter; and in the third place, as the wound heals you can gradually withdraw one after another of the hairs, making the drainage material smaller and smaller as granulation takes place, until eventually you take out the last strand, when there is nothing but a little fine sinus or fistulous track left to heal up.

Later along, the back of the whole hand became very much swollen and red, and it was called erysipels by the surgeon who had charge of it, and incisions were made, with the result before mentioned.

Now, I propose to put this man under ether, and make a careful examination, to see whether we can find the foreign body. I may say to you, in passing, that I believe that in all such injuries about the extremities, parts which are not particularly vital. I think the best time to find the ball is immediately after the injury. The patient after receiving such an injury should be put under an anæsthetic at once, while the parts are soft and diffuse inflammation has not occurred, and careful search should be made for the ball. Sometimes it is exceedingly difficult to find it after the present condition has taken place.

I may say, further, with regard to this man's history, that he came to my office a few days ago, and he seemed to be suffering a great deal of nervous irritation; he could scarcely bear to have his hand touched, or even looked at, and I obtained a statement from him that there had been during the last two or three days a little difficulty in opening his mouth; a little stiffness around the jaw, looking as though he had the commencement of trismus, but at that particular time none of those symptoms were present; he could open his mouth perfectly well as he can do now. Still, he tells me that since then he has been

troubled with a little stiffness about the jaw, and we may have, therefore, a slight degree of tetanus or trismus. It is just one of those injuries in which we are liable to get that condition, and for that reason, and also for the reason that he was suffering intensely, I put the patient at once upon support, gave him a liberal amount of nourishment, and put him upon anodynes and quinine. He had some fever. I gave him two ten-grain capsules of quinine, to be taken on succeeding nights, and one-third of a grain of morphine with a little hydrate of chloral, to be taken in sufficient quantity to relieve him of suffering. He tells me to-day, that since Saturday he has not suffered as much, although Sunday and Monday there was a good deal of pain.

and Monday there was a good deal of pain.

In giving a patient ether, I presume you all understand the necessity for his coming to the operation with an empty stomach. You have all seen instances here, in which patients have come to the clinic with a full stomach, obliged to take ether, and you have noticed that they always yomit, and thus delay the operation. It takes a good deal longer to put them under the influence of the anæsthetic, and there is always a certain amount of danger, if there is solid material in the stomach, that some of it will be vomited up into the throat, and during inspiration fall back into the larynx and suffocate the patient. This patient has eaten nothing since breakfast.

In giving ether almost all patients complain of a sense of suffocation during the first few inspirations. This is generally relieved, if they will remember (as long as they can remember anything) when the sensation becomes intolerable, to cough. I suppose this sense of suffocation is due to the first effects of the ether upon the sen sitive tissue about the fauces and larynx. After a few inspirations these parts become more or less insensible and the patient does not experi-ence that disagreeable feeling. Etherization should be commenced rather slowly, not crowding it to the full extent at once, taking it off of the patient's mouth occasionally if he stops breathing, until that first condition has passed away. Then with most patients, especially those who breathe freely, there comes in a few moments a condition of anæsthesia, which is very temporary in its character. It sometimes comes within one or two minutes after the commencement of inhalation. It is what we call primary anæsthesia, and it continues just about long enough to enable you to open an abscess, or extract a tooth, or do some small operation of that kind without the patient knowing anything about it. In such small operations you should avail yourselves of this primary ansesthesia, because it saves the patient a great deal of that nausea or deadly sickness which follows complete anæsthesis. The patient will come out of this primary anæsthetic condition in a very short time, and will be able to walk out of your office and go home without assistance. On the contrary, if you do not take advantage of that period, you will have to carry him to full anæsthesia before you can do anything, and then the patient is utterly unable to do anything for a period of half an hour to one or two hours. He is in a state similar to that of a man intoxicated from alcohol, having no power over his legs, arms, or muscles, in any way.

Some gentleman asks the question whether the fact that a man is intemperate prejudices the case with regard to the operation? I answer, most undoubtedly, yes; that men who are intemperate in their habits not only bear certain injuries very badly, but they are just the kind of patients with whom we have so much trouble with that kind of delirinm tremens in which we are apt to have high grades of surgical fever, and everything of that kind, and the same is true with regard to a surgical operation. The shock which is produced does not seem to be modified very much, whether it is made by an operation of the surgeon. Such patients always bear injuries very badly, and they are a trouble-some class to get along with.

Here is another point to which I may call your attention in all such injuries, that after they have been violently inflamed and poulticed, as this one has, you will find the epithelial layer of the skin separated from the true skin in large masses, such as you see here, and there is always more or less pus accumulated, and it is very desirable to get such skin out of the way. It increases the fetor of the wound and helps to keep the parts in a very disagreeable, unwholesome condition. I am always in the habit, therefore, of pulling this skin off as far as it is detached, or of cutting it off with the scissors. You will notice that under this there has already been a little sloughing of the superficial layers of the skin.

The ball has splintered the finger and passed through to the other side, I believe, however, without involving the joint. It was a small one, with but little powder behind it, and it has, therefore, lodged under the skin, not passing entirely through. You will observe, that the periosteum is destroyed clear down to the metacarpophalangeal articulation, down to which point my probe passes through a sinus. As this is a very important finger we will not amputate it, but try to save it. It is in a condition, however, which in the old time would have been condemned at once as utterly impossible of repair, but it seems that the worst of the inflammatory action is over, and having removed one source of irritation, namely, the ball, it is quite possible that this bone may unite, and the denuded surface cover itself up again, and give the man a pretty useful finger.

There is another sinus extending along the back of the finger, which we will open. Then stuff these wounds full of finely picked lint, and put the hand up in a bandage for the present. First, however, washing the wound with carbolic acid and water, one to forty. The bandage should be so applied as to bring the separated surfaces close together, and the finger should be placed upon some little splint, to keep the parts in position, and give nature a chance to heal the fractured bone. If she does not effect a cure, then but one thing will remain to be done, namely, to make an amputation at the metacarpo phalangeal articulation.

Now, I believe that a good deal of this trouble would have been prevented if the patient had been put under an anæsthetic at the time he

received the injury, and time had been taken in making a thorough examination, for the ball lay just around on the back side of the bone, having crushed the bone and gone through : at the same time I could not appreciate it with the probe. I could feel a quantity of rough material there, but whether it was bone or lead I could not say, and I therefore enlarged the opening so that I could get my finger in and feel it. And, by the way, the finger is the best of all probes for all wounds. And I think it is frequently perfectly justifiable to enlarge the wound in almost any situation, except in the abdomen, etc., if the wound is to be probed, and introduce etc., if the wound is to be probed, and introduce the finger and learn precisely just what has taken place. To give you an illustration of what I mean, let me refer to a case which oc-cured while I was in the country, last summer. A young man was taking a Winchester rifle from under the seat on which he was sitting, in a boat, and in doing so struck the hammer against one of the ribs of the boat, and the gun exploded, the ball passing through the under and back part of the thigh, just in front of the gluteal fold, and I cut it out, here, just under the upper edge of the trochanter. There was a little hemorrhage, considerable shock, and at first it seemed as though the man had received simply a flesh wound, the ball passing behind the thigh bone and lodging under the skin. But I was not satisfied with that idea, and I therefore enlarged the openings after the man had sufficiently rallied from the shock, and then instead of probing with a common silver probe, or any other instrument, I passed one finger of either hand into each of the openings, and then found that although the external wounds were small, being made by a forty-four ball, there was a cavity all the way between which certainly seemed to me two inches in diameter, and it seemed to me two incress in diameter, and it was full of pieces of broken bone, and of fragments of the man's drawers and pantaloons. My fingers met within the cavity of the hipjoint, and I found that the capsular ligament had been shot away, the edge of the acetabulum was torn off, and large pieces of bone were hanging there only attached by little bits of tendinous material, and the posterior half of the neck of the femur had been gouged out all the way from the round head down to the trochanter, so that although there was no solution of continuity in the length of the bone, yet there was a very severe injury involving the hip joint. Now, I never could have ascertained all that by simply introducing a probe, but with my finger I could feel everything, and know exactly what had taken place. I therefore recommend you, in all cases, when examining such wounds, especially those which are supposed to contain foreign bodies, to enlarge the opening and introduce your finger and make a proper exsmination.

A gentleman asks what are the indications of primary anæsthesis. When that period is reached you can open the eye and touch the conjunctiva without giving the patient pain.

Mrs. —, thirty years of age, married, has borne four children, the eldest nine years and the youngest sixteen months. About fifteen years ago she had a swelling under the arm, which she

supposed was an abscess. Two months ago she had another swelling at about the same place, which disappeared, but has again reappeared, attaining this time to a much larger size—as large as a hen's egg, somewhat flattened out. It has a nodular, irregular feel, on the surface but it is not excessively hard. It causes her no pain, and is not tender to manipulation. There is no glandular enlargement under the other arm nor about the neck. There is no trouble with the breasts, and she says she never had any eruption of the skin, sore throat or sore mouth, or anything pointing to a syphilitic history. I should, therefore, be inclined to regard this simply as a mass of axillary glands, in a chronic state of enlargement or inflammation. I think the history points conclu-sively to that. There is nothing to account for it otherwise; nothing in the breasts. no corresponding enlargement of other glands on the opposite side or about the neck, no history of any specific disease that we can get at; and there is, on the other hand, the story of an old abscess there sixteen years ago, which was unquestionably a suppurating gland, and then in the early part of last summer some glands there, were swollen, which subsided, and subsequently the same condition which produced the first difficulty involved the other glands, and ten or a dozen, or more of them in a mass, have become swollen and in a state of chronic inflammation.

The treatment consists, in the first place, in trying what can be done by constitutional remedies and by local applications. Among the local applications the best are, probably, some of the preparations of mercury. Those which we use particularly at the present time for this purpose are the different strengths of the cleate of mercury, a preparation which looks precisely like olive oil. It is made in three different strengths, I believe; one about six percent., another about twelve, and a third about eighteen. The medium one is that which is generally employed for this purpose, and also for the treatment of all glandular swellings, and in the treatment of specific disease. The eighteen per cent. preparation is rather too strong for extensive application; it is rather apt to produce the ordinary effects of mercurial inunction, that is, salivation, after a while.

I should give her internally a pretty long course of the iodide of potassium in moderate doses only, perhaps about three to five grains three times a day, combined with a thirty-second of a grain of the corrosive chloride of mercury, or corrosive sublimate, putting them into a solution of water, so that a teaspoonful would represent a dose. I would recommend you always to write corrosive chloride of mercury instead of bichloride, so that your druggist cannot make a mistake. If, after trying this treatment a reasonable length of time, there is no attempt at diminution in the size of this mass, the question will come up as to an operation, which, I think, could be easily performed, as the mass is freely movable, and does not seem to surround any important vessels. I presume a straight incision on the surface of the tumor would enable one to split open the capsule of each one of the glands, and with the handle of the knife turn it out of its

MEDICAL SOCIETIES.

PHILADELPHIA LARYNGOLOGICAL SOCIETY.

Stated meeting, held at the house of Dr. C. S. Turnbull, 1702 Chestnut street, on Friday evening, Nov. 25, 1881. The President, Dr. Cohen, in the chair.

Before the meeting was formally opened, Dr. Turnbull exhibited a case of chronic inflammation of the nasal mucous membrane and inflammatory occlusion of the Eustachian tubes, causing deafness.

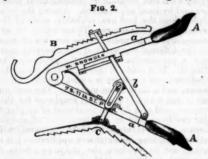
Dr. Sajous exhibited a new instrument of which

he gave the following description:-

It combines three actions, and when in place does not require the use of either hand. The first of these actions is the maintenance of the mouth in the opened state, performed when the instrument having been placed closed in the



oral cavity (as in Fig. 1), the branches, A, separate at one end (as shown in Fig. 2), and



the grooved rests press against the upper and lower teeth. The separation of these branches, brought about by a double spring placed between them near their point of junction, causes the elevation of the arms, b, fixed at one end to the lower branch and attached at the other to the ends of an arched rod connecting the two upper branches, and which pass through a slot cut through each of these two upper branches. Being free in these slots, when the instrument is closed, the rod descends towards the posterior extremities of these branches, forced down, as it were, by the arms b, which revolve around their point of attachment just behind the dental rests. To the middle of this arched rod a pin is fixed, to which can be attached, at will, a palate hook, shaped as shown by letter B, (Figs. 1 and 2); this can be adjusted at any length, making it adaptable to any mouth. This then represents the second action, that of elevating the soft palate. The third action, depressing the tongue, is performed in the following manner: A curved bar

connects the two lower branches, its ends passing and rotating friely in a hole punctured in the middle of each of these branches; to each protruding end is attached a small arm, c, perforated also with a longitudinal slot, and sliding freely on closing or opening the instrument, over a pin fastened to the centre of arm, b. The middle of this curved bar is adapted to a metallic heartshaped plate, which is forced down when the instrument is opened, and maintains the tongue depressed.

Manipulation.—The instrument is entered closed into the mouth; the end of the palate hook is passed behind the uvula, and the grooved rests being placed between the jaws, the patient is directed to open his mouth to its full extent. The instrument opening at the same time, the soft palate is elevated by the flat hook B, the tongue is forced down by the depressor C, while the jaws are held apart by the horseshoe shaped tooth-rests, A. The whole instrument can be locked in this position by a rack which engages the ends of the upper cross-bar, arresting its descent in the slots and preventing the approximation of the dental extremities of the instrument.

The advantages offered by it are evident: The hands are perfectly free and the different parts of the buccal cavity are held in such positions as will facilitate greatly the examination, while at the same time increasing the field. For the evulsion of post nasal tumors, or local applications in the posterior nares I have found it invaluable. The increased space behind the palate permitting the use of a large three fourths inch mirror, and enabling the eye to follow the point of whatever instrument is used in the nasopharyngeal chamber.

Unfortunately, the reflex irritability of the soft palate often precludes the use of any instrument calculated to interfere with its functions. The moment it is touched, its muscles contract, (levator veli, azygos uvulox, etc.), and its free border and that of the posterior arch adapt themselves closely against the pharyngeal wall, rendering a view absolutely impossible. For these cases, the palate elevator can only be used after having accustomed the parts to the presence of the hook—as the larynx is habituated to that of the forceps prior to the evulsion of tumors. Of course, this is only necessary when a prolonged view of the parts is required, as for the extraction of polypi, adjusting a snare wire, etc. If, however, an immediate view is absolutely necessary, a slight pull on the uvula with the fingers will paralyze the palatal muscles for a few moments, and the hook will be borne for that length of time without trouble.

Taking this reflex irritability in view, I made the elevator separable from the body of the instrument, and adjustable to it, while the gag and depressor are already in the mouth. If needed, it is held at the end of a pair of forceps, the hook is passed behind the velum, this is retracted, and the handle of the hook is attached to the pin in the centre of the upper crossbar. If it is not needed, the rest of the instrument will be found very useful as a tongue depressor and mouth gag, in ordinary rhinoscopic examinations and applications, and in all operations about the palate,

uvula and pharynx. The palate hook, inde- troubles of the pharynx, when an extended view pendently of the rest, can be used in many postnasal cases with great advantage, and in all

is necessary. C. SEILER, M.D., Secretary

EDITORIAL DEPARTMENT.

REVIEWS AND BOOK NOTICES.

NOTES ON CURRENT MEDICAL LITER-ATURE.

-In a pamphlet of twenty-two pages, Dr. Boardman Reed shows the advantages of Atlantic City as a winter health resort. It is a republication of the following papers: "The Climate of Atlantic City, and its effects on Pulmonary Diseases;" "What Atlantic City can do for Consumptives;" "The Sanitary Condition of our Seashore Health Resorts," and other papers, including a letter from Dr. William Pepper. It contains among other things full official reports, meteorological tables, etc., concerning the climate of Atlantic City.

-The introductory address delivered before the Class of the College of Physicians and Surgeons, of Baltimore, Sept. 14, 1881, by A. Friedewald, M.D., Professor of Diseases of the Eye and Ear, was a masterly depiction of the life and career his hearers had chosen for themselves. The address comes to us in pamphlet form.

We have received, in the form of a reprint from the Annals of Anatomy and Surgery, a valuable paper on the Surgery of the Pericardium, by Dr. John B. Roberts, of Philadelphia.

BOOK NOTICES.

The Diagnosis and Treatment of Diseases of the Eye. By Henry W. Williams, A.M., M.D., Professor of Ophthalmology in Harvard University; Ophthalmic Surgeon to the City Hospital, Boston, etc., etc. Boston: Houghton, Mifflin and Company, 1881. Cloth, 8vo. pp. 464.

Encouraged by the favorable reception awarded to successive editions of his smaller work on diseases of the eye, the author has prepared a larger and more complete treatise, chiefly designed for the use of students and general practitioners. The book opens with a chapter on the method of examining the eye, a subject on which the author very appropriately bestows considerable attention. The general principles which should guide us in the treatment of ocular diseases are then briefly discussed. The avoidance of very active remedial agents forms the chief characteristic feature of Prof. Williams' scientiously recommend to the profession.

therapeutic armamentarium. Acetate of lead he excludes from the list of ophthalmic remedies. and he cautions the inexperienced against the use of nitrate of silver. Several other remedies which have recently come into great favor with ophthalmic surgeons, such as boracic acid, hot water applications, etc., he makes no mention of. The chapter on traumatic injuries of the eye, and on affections of the various tissues of the eveball are good. Each chapter opens with an anatomical description of the part under consideration, followed by concise but very accurate descriptions of the diseases by which they are invaded, together with such treatment as the author has found of most value. With regard to treatment, we think the author rather over-cautious in his warnings against potent remedies, such as nitrate of silver, for instance; yet, writing as he does for the general practitioner, if erring, it is better to err on the safe side; still we cannot help believing that many an eye has been destroyed by purulent ophthalmia, which would have been saved by the early use of this remedy before the cornea had become affected. In the treatment of glaucoma he regards surgical means as the only resource, and insists, we think very wisely, that iridectomy should be done promptly. Color-blindness receives full attention. This he regards as usually congenital and incurable; sometimes it is hereditary. Exceptionally, he says, it may appear as a symptom following disease of the optic nerve or brain, injuries to the head, serious illness, or the abuse of tobacco or alcohol. It very rarely affects females. He gives full directions for its detection. Considerable space is devoted to refraction and accommodation, errors or defects in the same and how to correct them, a subject with which every physician should be familiar. Separate chapters are devoted to diseases of the orbit; artificial eyes, how to choose them, and full directions for their insertion and removal; affections of the lachrymal organs and of the eyelids. The book is also provided with a set of test-types (Snellen's). The illustrations, including two colored plates, showing normal and pathological appearances of the fundus oculi, are all good, and the work is one which we can con-

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D. G. BRINTON, M.D., EDITOR.

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THOUGHTS ON THE PROGRESS OF MEDICAL KNOWLEDGE.

With this number we bring another year to the close. It has been one of unusual activity in medical science, culminating in the most important meeting of physicians and surgeons which the world has ever known, at the International Medical Congress in London, in August.

Whoever will compare the advances in our professional acquisitions during the last twenty years with any equal period antecedent, cannot resist the impression that sound scientific knowledge is advancing more rapidly-much more rapidly-now than in any previous age.

What, we would ask, is the reason for this? Are men more devoted, more enthusiastic, more earnest in the pursuit of knowledge than their predecessors? No one can maintain this. The records of hundreds of lives in previous centuries refute the suggestion. Is it, then, that our mental power is greater, that our facilities have so improved that we can grapple more successfully than our forefathers with the mysterious processes of nature, and wrest from them the secrets of their actions? We fear we cannot lay this flattering unction to our souls. There is no evidence that either in the individual or in the aggregate, man has increased in mental power in the last two or three thousand years.

Two facilities we have which our ancestors had not, and these two are sufficient to explain this progress.

We now understand the proper methods of interrogating nature. A priori theories of the universe have been dismissed; the authority of great names has been abrogated; the logic of induction has superseded that of deduction, and the corner stone of positive science has been laid in the grand axiom that every statement which claims belief must be verifiable. These are the principles which have swept away, as with a mighty besom, the cobwebs and antique dust which for so long obscured the human reason.

The second advantage we have above those who have gone before us in the paths of scientific research, is the extreme facility for intercommunication which we enjoy. Nothing like it could have been conceived as possible, even at the date of birth of men yet living. That the events of yesterday at the antipodes could be regularly chronicled in the morning paper, would have surpassed the dream of the wildest enthusiast of a century ago.

Let a man, now, in ever so obscure a corner of the world, announce, in a local paper of the smallest circulation, a discovery of real importance, and in a few days it will become the property of all the leading students and thinkers in that department of knowledge. All the world will know of it, so far as the world is interested

This is but an ordinary and commonplace illustration of the power of the press, and the influence in the dissemination of knowledge which it exerts. It shows strongly what an immense agent for the advance of the race is the department of periodical literature, especially that of frequent issue.

In medical literature this is just as obvious as

elsewhere. We have often noted how a country physician, we will say, writing a letter to the REPORTER, containing some useful observation, or describing some typical case, would, in a few weeks, have his name reappear in a dozen journals printed in as many different countries, and almost in as many different languages. Whatever the merit of his discovery, of slight or of great moment, the tribute of credit was impartially and promptly awarded him by the universal and catholic church of science. So in return, through the pages of the REPORTER, he has speedily learned every marked improvement, every noteworthy discovery, every typical sign of progress in his profession, which has transpired in every country of the world.

These are the considerations which should impel every physician to take, read, and occasionally contribute to an active medical journal. If he neglects to do so, he is unjust to himself, he does not do his duty by his patients, and he does not merit the full respect of his profession. More than this, if he does all these, his duty is not properly accomplished unless he urges every one of his colleagues to the performance of the same, and sets forth to them the inestimable advantages to every practitioner to keep himself in constant contact, by this means, with the active intellects of his domain of knowledge.

SPECIAL REPORTS.

No. XX .- OPHTHALMOLOGY.

BY C. S. TURNBULL, M.D. (Concluded from Vol. XLV, page 721.)

H. KNAPP, M.D., reports (Archiv. Ophthal., Vol. x, No. 1, p. 97), a fatal case of sclerotomy for hemorrhagic glaucoma. Recognizing the fact that hemorrhagic glaucoma is the most unmanageable form, and that iridectomy is almost useless for it, Dr. KNAPP tried sclerotomy, which was not only unsuccessful, but fatal.

The same authority (loc. cit., p. 100) reports a case of

SUCCESSFUL REMOVAL OF A SMALL FOREIGN BODY IN THE POSTERIOR CORTEX OF THE LENS.

Dr. KNAPP removed the lens, and with it the foreign body, through a linear corneal section (with a Graefe's cataract knife), the extremities of

which were near the corneal margin, and about 1 mm. above the horizontal meridian, whereas its apex was from 2 to 3 mm. below the upper corneal margin. No iridectomy was made. Eserine was at first used, subsequently atropine. One month later V. was \$\frac{2}{3}\text{0}\$, and the pupil was round, central and perfectly clear. Dr. KNAPP says the operative procedure appeared safe and to be recommended for similar occasions. The foreign body was a minute metallic body, 1 mm. long. The lens substance surrounding it was stained with rust.

In his abstract of Am. Opthal. Literature for the last quarter of the year 1880, Dr. SWAN M. BURNETT, of Washington (loc. cit., p. 103), reports the following:—

Dr. MICHEL. Effect of Quinine on Sight and Hearing.—At a meeting of the St. Louis Medico-Chirurgical Society, (St. Louis Courier of Medicine, Nov. 1880), Dr. MICHEL reported the case of a man 38 years of age, who, suffering from intermittent fever, took seven drachms of quinine in the course of twelve hours. Soon after he became suddenly blind. This was six months ago, and he was still blind. O. S. showed the nerve to be pale, veins thread-like, and arteries almost bloodless and scarcely perceptible.

Dr. BAUMGARTEN, reported a case of a boy who lost sight and hearing after taking what was estimated as five drachms of quinine. He recovered in about six weeks.

D. S. REYNOLDS. Contusion of eyeball by a shot, the shot remaining in the retro-tarsal fold for nearly a month. 2. A boy had his eye "gouged out" in a fight. Retina was severed from the disk, but none of the vessels were ruptured. 3. Complete detachment of the retina caused by a blow from a fan. 4. A low degree of astigmatism \$\frac{1}{2}\$\text{ corrected} with complete relief to asthenopic symptoms (N. Y. Medical Record, Dec. 4).

E. C. Mann. On the treatment of blindness and deafness resulting from cerebro-spinal meningitis by the constant current of electricity (Medical Gazette, Dec. 4). Dr. Mann reports that he has obtained somewhat remarkable results from the use of the constant current in conjunction with hypodermic injection of nitrate of strychnia in such cases.

D. Webster. Amblyopia from abuse of tobacco and alcohol (N. Y. Medical Record, Dec. 11). Webster formulates his conclusions from an examination of twenty cases, as follows:—

 Amblyopia from poisoning by alcohol alone, or by alcohol and tobacco combined, is not uncommon. does occur, but in this country somewhat rarely.

3. Cases of amblyopia from abuse of tobacco and alcohol will usually improve, perhaps to a limited extent, on simple abstinence from the poisons causing the disease.

4. They will improve much more rapidly, under treatment by hypodermic injections of strychnia, this drug having a specific stimulating influence on the nervous portion of the visual apparatus.

B. J. JEFFRIES. Removal of a piece of iron from the eye by the electro-magnet (Boston Medical and Surgical Journal, Dec. 30).

C. H. WILLIAMS. Notes of changes seen in the eyes of ten cases of general paralysis of the insane (Boston Medical and Surgical Journal, Jan. 13). The commonest symptoms were small pupils, with slow and poor reaction to light. In four cases no changes were noted in the fundus. In four cases there were slight signs of atrophy of the disk. In two cases of short duration there were slight evidences of congestion about the disks.

H. W. WILLIAMS. Continued toleration of foreign bodies within the eyeball for fifteen and twenty-two years (Boston Medical and Surgical Journal, Jan. 27, 1881). Two cases were given.

Dr. OPPENHEIMER. Foreign body in the Eye. Removal by a Magnet. In the case reported above by JEFFRIES, the foreign body was removed through a corneal, and in OPPENHEI-MER's case, through a scleral (near rectus internus), section. GRUENING'S magnet was used in this case. V. 200.

The Report of Progress of Ophthalmology for the first half of 1880, by H. MAGNUS, of Breslau, and A. NIEDEN, of Bochum, translated by Dr. R. O. BORN (Archiv. Ophthalmol., vol. x, No. 1, p. 108). GALEZOWSKI observed irideremia in one family, through several generations (Clinique Ophthal., R. d'O, 1880).

Magnus. Defect of lower lachrymal puncta on both sides, C. f. A., congenital.

SCHNELLER. The nutrition of the retina (A. f. O., vol. xxvi, i). The retinal vessels nourish sufficiently the layers of nerve fibres, ganglion cells, and the nervous elements of the inner granular layer; they can also supply both layers of granules and keep in a condition of vita minima for a limited period, the layer of rods and cones. The vessels of the chorio-capillary layer supply the pigment layer, rods and cones, outer limiting membrane, and the layer of outer granules.

ZEHENDER. Attempt at transplantation of a piece of cornea of a dog into the human cornea of the Medical Record, his right to make further

2. Amblyopia from poisoning by tobacco alone (Z. M., p. 189). The enucleation, four days later, showed the healing had not yet taken place.

> SCHLIEPHAKE. The effect of muscarine on the human eve. It causes an intense spasm of the ciliary muscle, and irritates the conjunctiva less than extract of calabar and physostigmine (Mittheil. aus d' Ophth. Klinik in Tübingen, Heft 1,

> PREYER. Psychogenisis (Deutsche Rundschau. May, 1880). The development of the sense of vision, pp. 213-216. The symmetry of the movements of the eye is not congenital, but is gradually acquired; at first, the movements are asymmetric. Before the third year the color sense is not fully developed; blue is the last color which is designated correctly. At first the visual field is composed only of indistinct light and dark spaces, and only the intensity of light is appreciated. Toward the end of the first month the child begins to fix its gaze and to accommodate.

> Berger. Hypnotic conditions and how they are brought about (Breslauer, Aerzth, Zeitschr., 1880, Nos. 10-12). It is stated that color blindness is temporarily cured, not only by warmth applied to the eye, but also by intense irritation of the skin, as pinching of the skin, cutaneous faradization, etc.

> H. COHN. The disappearance of color blindness after warming the eye (Deutsche Med. Wochenschr., No. 16). Three distinctly color blind persons are said to have lost their color blindness for a moment by warming the eye.

> JEFFRIES. Report of the examination 27,927 school children for color blindness (School Document, No., 11, of Boston, 1880). 608 male children were color blind, = 4.202 per cent., and 9 females, = 0.006 per cent. He recommends Magnus' system for the education of the color sense.

STRASSER. Contributions to the use of disinfectants in ophthalmology (Inaug. Dissert. Beme.). After experiments upon animals, the following preparations only seem to be adapted to ophthalmic practice: a 4 per cent. solution of boracic acid, a 5 per cent. solution of benzoate of soda and chlorine water.

GATTI observed amaurosis after the use of salicylate of soda (Gaz. degli. Ospital., Vol. i, 4).

AGNEW and WEBSTER. The alleged cure of cataract by electricity. The statements of Neftel were not confirmed by the later examination of the patient (Med. Record, Vol. xvii, No. 20).

"CHURCHMAN." The editor of the Churchman (a religious paper), claims, in a letter to the editor publications upon the astonishing results of a satisfactory manner, for all the phenomena treatment of cataract by electricity (Medical Record, Vol. xvii, No. 13). The reviewer begs leave to call attention to the fact, that in the first third of this century there was a great excitement over the cure of cataract by electricity, but without any foundation. Compare MAGNUS "Geschichte des grauen Staares," Leipzig. 1876.

KNAPP, Neftel's alleged Cures of Cataract by Electricity, (Medical Record, Vol. xvii, No. 24). The patient was neither cured nor even benefited, but had become near-sighted. The so-called "second-sight" of old people almost always indicates cataract.

FRANKEL. Removal of a piece of iron from the vitreous chamber by a scleral section and the magnet. C. H. A., p. 87.

JONES. Mentions an operation for cataract by discission from behind. Lancet, No. 25.

O. E. DE FONTENAY, Copenhagen, concludes as the result of examinations for color blindness in Denmark.

1. The number of color blind is 2.25 per cent. (both sexes together).

2. Color blindness more common among men.

3. It is more common among the lower classes.

4. It is equally distributed over the whole country.

5. Red blindness is more common than green.

6. The defect exists always in both eyes.

7. The color of the eye has no effect.

It must be finally said that the more numerous the examinations, the smaller the per cent. found. (Archiv, Ophthal., Vol. x, No. 1,

HOLMGREN (loc. cit. p. 17) in 1877 published his results as to heredity in color blindness. His experience was large, and he deduces the following:-

1. Color blindness is hereditary, and attached to certain families.

2. It may not be found in one generation, to reappear in the next.

3. All the children will not be affected, the girls especially escaping.

4. When several children are affected, it is traceable to the mother.

5. The kind and degree will be the same for all the cases in the family.

Dr. Swan M. BURNETT, of Washington, D. C., in an excellent article (Archiv. Ophthal. Vol. x, No. 1, p. 1) entitled "Color Perception and Color Blindness," commences by saying, "A theory of color perception, in order to be acceptable, should account consistently, and in

of colored vision and color blindness. I take it to be a generally conceded fact, that neither of the two at present prominent hypotheses, do this." He then goes on to say, "We are fully justified, I think, in assuming that the true theory of colors, when found, will be simple, and that it will conform to the known and demonstrated laws governing the action of light on simple bodies, and in our opinion it will be found to lie in the direction pointed out by recent experiments on the action of light on the molecular condition of certain substances, and, moreover, we believe, quite contrary to the present accepted opinion, that variation in sensation will have its basis, not in complexity of tissue, but in the varying action of the affecting agent."

CORRESPONDENCE.

Questions on Vaccination.

ED. MED. AND SURG. REPORTER :-

Referring to the discussion on vaccination in your journal :-

1. I know that some persons are temporarily insusceptible to the effects of vaccine virus. One case, among many in my practice, is this: I was called to a man whom I found with the symptoms of malignant smallpox. I asked him why he had not attended to vaccination? He noticed the tone of fault finding in my voice, and said, "You cannot blame me, Doctor, for I have been vaccinated twenty-two times, and you have vaccinated me three times yourself." He died in three or four days. There can be no doubt that he had been insusceptible to the effects of vaccination; but I have no doubt that if he had been vaccinated within a short period before he was exposed to smallpox, the vaccination would have taken effect and his life would have been saved. records of 26,399 vaccinations, to this date, show many scores, I think hundreds, of cases, where children were vaccinated with perfect success, who had been unsuccessfully vaccinated previously, from one to fifteen times. It is probable that a considerable number of these had been temporarily insusceptible to the effects of vaccination, though in the greater portion of the cases the failure was the fault of the vaccination.

2. Another case may have some bearing upon another point discussed by your correspondents:
A child was born of a woman sick with modi-

fied smallpox or varioloid. The case was severe, the eruption was profuse, and the child was born on the fourth day of the eruption. I vaccinated the child when it was just twenty-four hours old, and at the same time another child about two years old, who had never been vaccinated. The vaccination produced a perfectly typical result in both children; they both remained in the room with their mother, and in the adjoining room, and neither of them had the slightest symptoms of smallpox. The tenement had only two rooms. The disease in the mother had not protected the child from the effects of vaccination. Want of time prevents me from inflicting a much longer story of experience upon you. E. M. S. Providence, December 17th, 1881.

NEWS AND MISCELLANY.

OBITUARIES.

DR. I. I. HAYES.

In New York city, Dec. 17th, Dr. Hayes, the well-known Arctic explorer, died suddenly, of

heart disease.

Dr. Hayes was born in Chester county, Pennsylvania, March 5th, 1832. He was sent to the University of Pennsylvania, from which he was graduated in 1853. Before his graduation he had applied to Dr. Kane for permission to join in the second expedition to the Arctic, and secured the appointment as surgeon of the expedition. He landed in New York from this expedition October 12th, 1855, after an absence of two years, four months and thirteen days. Upon the return of Dr. Kane's expedition, Dr. Hayes announced his conviction that, netwithstanding the failure to reach it, an open Polar sea did exist, and he set about raising the money to organize an expedition to discover it. In December, 1857, he presented his views to the American Geographical and Statistical Society, and during the succeeding winter he lectured throughout the country and at the Smithsonian Institute in Washington. In 1860 the schooner United States, of 133 tons, was fitted out, and Dr. Hayes placed in command. He sailed from Boston with a party of fourteen men, on July 10, 1850, and reached Boston on his return October 23, 1861. The chief results attained by the expedition were the completion of the survey of Smith Sound, the discovery of a new sound or channel, opening westward from the centre of Smith Sound, the determination of the magnetic dip and declination at many points within the Arctic circle, surveys of glaciers by means of which the rate of their movement is determined, and pendulum experiments. Upon his return home Dr. Hayes found the war in progress, and he at once volunteered as a surgeon in the Union army, and served in that capacity until the close of the war. Upon retiring from the service he devoted himself to the preparation of a history of his voyage to the North. This was published in Boston, in 1867, under the title of "The Open Polar Sea," and was followed in 1868 by another volume describing some of the more thrilling in cidents of the expedition, entitled "Cast Away in the Cold." Upon the appearance of his first book he was presented with a gold medal by the Royal Geographical Society of London, and in 1868 he received another from the Geographical Society of Paris. His ardor for Polar expeditions had not weakened, but he was unable to organize another exploring party to the North Pole, and in 1869 he started on a trip to Greenland, with William Bradford, the artist, in the steam yacht Panther. The story of this voyage, with the scientific facts gathered by the Doctor, are preserved in "The Land of Desolation," published in New York, which Dr. Hayes had

decided on making his home in 1872. This was the last extensive travel in which the Dr. engaged. In the last few years he took an active part in politics. Dr. Hayes never married.

QUERIES AND REPLIES.

Physiology.

Mr. EDITOR :- Is there any other way known by which living matter germs can set up in other living matter germs the process of cell formation, than by fertilization? What is the physiological prototype for the pathological formation of cells?

2. Upon the supposition that a specific disease is set up by a foreign organism, why cannot the same disease be again always set up by the same organism-

how is immunity given?

3. If there is a germ external to the organism, by which specific diseases are produced, why do many escape? Is there any known or alleged principle by which many resist the disease—the germ? A. L. C.

We leave the above for some of our readers to answer, and shall be glad to publish their replies.

Dr. C. E. Q., of Penna .- Dr. Wm, Goodell.

MARRIAGES.

BRONSON-HOTCHKISS.-On Monday, Dec. 12th, in St. Ann's Church, West 18th St., by the Rev. George C. Athole, Jno. O. Bronson, M.D., of New York, and Martha P. Hotchkiss, of New Haven, Conh.

DIXUN-DUNTON.—At the residence of the bride's parents, Brooklyn, N. Y., on Tuesday evening, Dec. 13th, 1881, by the Rev. Thomas B. McLeod, Dr. George A. Dixon and Saran Pearl, daughter of William U.

MARTIN-POTTS.—On Tuesday, December 13th, in the Cohocksink Presbyterian Church, this city, by the Pastor, Kev. William Greenough, Mr. Joseph Martin, M.D., and Miss Saille Potts, both of this city.

WEBB-WHEDON.—At the residence of W. W. Whedon, Ann Arbor, Mien., Nov. Soth, by the Rev. J. Alabaster, D.D., Wm. J. Webb, M.D., of Lowell, Mich., and Miss Neille M. Whedon.

DEATH.

BRICKEL.—Dr. D. Warren Brickel, a prominent physician of New Orleans, died December 11th, at the age of 51 years.

CURTISS.—Dr. Thomas S. Curtiss, a well known surgeon at the Massachusetts General Hospitai, in Boston, died suddenly, December 11th, at the age of 40 years. He was graduated at Harvard and in Paris, and was a member of many medical societies at home and abroad.

DONALDSON.—In St. Johnsbury, Vt., Nov. 28th, Dr. W. A. Donaldson, aged 33 years.

FORSTER.—Near Georgetown, S. C., July 29th, 187s, Alexius Mador Forster, M.D., in the 64 h year of his age.
At the same place, Oct., 30th, 1881, Alexius Mador Forster, Jr., M.D., aged 34, second and eidest surviving son of the former.

GRIMES.—Dr. Thomas W. Grimes, 60 years old, a prominent physician of Columbus, Ga., died suddenly, of heart disease, while sitting in a châir, December 12th

RODGERS.—In Norwalk, Fla., on Nov. 30th, George M. Rodgers, M.D., son of the late J. Kearney Rodgers, M.D., of this city.

STILLMAN .- Chas. H. Stillman, w.D., of Plainfield, N. J., on Sunday, December 11th.

